

Appl. No. 09/754,264
Amendment/Response in reply
to the Notice of Non-
Compliant Amendment dated
April 27, 2004

Page 3 of 9

Amendments to the Claims:

A clean version of the entire set of pending claims (including amendments to the claims, if any) is submitted herewith per 37 CFR 1.121(c) (3). This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Withdrawn) A method of depositing a wiring thin film on a semiconductor substrate, comprising the steps of:
 - depositing a Ti film; and
 - depositing Al-Si-Cu film on the Ti film at a temperature of at least 400°C to form a layer of Al₃Ti, which prevents Si-recrystallization in a subsequent cooling process.
2. (Withdrawn) A method of depositing a wiring thin film on a semiconductor substrate, comprising the steps of:
 - depositing a Ti film; and
 - depositing Al-Si-Cu film on the Ti film; and
 - annealing the semiconductor substrate at a temperature of at least 400°C to form a layer of Al₃Ti, which prevents Si-recrystallization in a subsequent cooling process.
3. (Withdrawn) The method of depositing a wiring thin film on a semiconductor substrate as disclosed in claim 1, comprising steps of:
 - depositing a Ti film;
 - depositing an Al₃Ti film on the Ti film;
 - and depositing an Al-Si-Cu film on the Al₃Ti film at a temperature of at least 400°C.

Appl. No. 09/754,264
Amendment/Response in reply
to the Notice of Non-
Compliant Amendment dated
April 27, 2004

Page 4 of 9

4. (Withdrawn) The method of depositing a wiring thin film on a semiconductor substrate as disclosed in claim 2, comprising the steps of:
 - depositing a Ti film;
 - depositing an Al-Si-Cu film on the Al₃Ti film; and
 - annealing the semiconductor substrate at a temperature of at least 400°C.
5. (Withdrawn) A method of depositing a wiring thin film on a semiconductor substrate, comprising the steps of:
 - depositing a Ti film;
 - depositing an Al-Si-Cu film on the Ti film; and
 - depositing an Al₃Ti film on the Al-Si-Cu film.
6. (Withdrawn) The method of depositing a wiring thin film on a semiconductor substrate as disclosed in claim 5, comprising the steps of:
 - depositing a Ti film;
 - depositing an Al-Si-Cu film on the Ti film; and
 - depositing an Al₃Ti film on the Al-Si-Cu film; and
 - annealing the semiconductor substrate at a temperature of at least 400°C.
7. (Withdrawn) The method of depositing a wiring thin film on a semiconductor substrate as disclosed in claim 5, comprising the steps of:
 - depositing a Ti film;
 - depositing an Al-Si-Cu film on the Ti film; and
 - depositing an Al-Si-Cu film at a temperature of at least 400°C.
8. (Withdrawn) A method as recited in claim 1, further comprising, after said forming said layers of AlTi₃, patterning an Al layer.

Appl. No. 09/754,264
Amendment/Response in reply
to the Notice of Non-
Compliant Amendment dated
April 27, 2004

Page 5 of 9

9. (Withdrawn) A method as recited in claim 2, after said forming said layer of AlTi₃, patterning an Al layer.

10. (Previously Presented) A method of depositing a wiring thin film over a semiconductor substrate, the method comprising:

 providing a Al₃Ti target;
 providing a substrate;
 forming a Ti layer over said substrate;
 sputter depositing an Al₃Ti layer on said Ti layer using said Al₃Ti target;
 and annealing said substrate at a temperature of at least 400°C to promote absorption of Si into said Al₃Ti layer.

11. (Previously Presented) A method as recited in claim 10, wherein an Al layer is deposited on said Al₃Ti layer.

12. (Previously Presented) A method as recited in claim 10, further comprising pattern-etching said Al layer thereby forming a wiring pattern.

13. (Previously Presented) A method as recited in claim 10, wherein the method further comprises forming an insulating layer between said substrate and said Al₃Ti layer.

14. (Currently Amended) A method of forming a wiring film, the method comprising:
 providing a substrate;
 depositing a Ti layer over said substrate;
 depositing an Al-Si-Cu layer on said Ti layer, which forms an Al₃Ti on said Ti layer; and

Appl. No. 09/754,264
Amendment/Response in reply
to the Notice of Non-
Compliant Amendment dated
April 27, 2004

Page 6 of 9

pattern etching an Al layer, which forms beneath said Al-Si-Cu layer;
and
after the depositing of the Al-Si-Cu layer, annealing the substrate at a temperature of
at least 400°C.

15. (Previously Presented) A method as recited in claim 14, wherein said Al-Si-Cu layer is deposited at a temperature of at least 400°C.

16. (Cancelled)

17. (Previously Presented) A method of forming a wiring film, the method comprising:

providing a substrate;
depositing an Al₃Ti layer over said substrate;
depositing an Al layer on said Al₃Ti layer; and
pattern etching said Al layer; and

after the depositing of the Al layer, annealing the substrate at a temperature of at least 400°C.

18. (Previously Presented) A method as recited in claim 17, wherein said Al layer is deposited at a temperature of at least 400°C.

19. (Cancelled)

20. (Previously Presented) A method as recited in claim 17, wherein said Al₃Ti layer is deposited at a temperature of at least 400°C.